

CVD Zirconia for TBC/EBC Applications

Project Lead





Oak Ridge National
Laboratory (ORNL)
Oak Ridge, TN

Description

The purpose of this task is to develop an atmospheric pressure chemical vapor deposition (APCVD) process for fabricating an yttria-stabilized zirconia (YSZ) electrolytes for a solid oxide fuel cell (SOFC). The process utilizes halide-based precursors flowing over a heated substrate in an atmospheric pressure reactor. The elimination of the typical requirement of a low-pressure reactor will substantially reduce fabrication costs. Development of the process is needed because the higher pressures generally cause poor coatings to be deposited and significant homogeneous nucleation that results in the formation of powder.

Duration: 10/1/88 - 9/30/01

Product Support Areas

Gasification Technologies	Combustion Technologies	Sequestration	Environmental & Water Resources	Advanced Turbine & Engines	Fuel Cells
					



Project:
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